

## RECORDS OF OHIO DRAGONFLIES

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During the past few years a large number of Ohio records of dragonflies have been accumulated from collections received for determination and from personal collecting within the state. These include numerous new county records and one species new to the Ohio list. All of the specimens were identified by the author except one specimen each of *Epiaeschna heros* and *Perithemis tenera* and a series of 40 specimens of *Anax junius*, the records of which were furnished by Homer F. Price.

All of the records from Defiance, Mercer, Paulding, Putnam and Williams counties are based upon collections made by Homer F. Price of Payne, Ohio. The greater part of these collections were made in Paulding County throughout the 1942 season, although a few were obtained in the latter part of the summer of 1941. Localities listed for Paulding County include Flatrock, Marie DeLarme and Blue Creeks, the Auglaize River at Fort Brown, the Maumee River in Crane Township and gravel pits in Benton and Paulding Townships. Mr. Price's collections from the other counties were made during 1942, as follows: Defiance—Auglaize River near power dam, May 24, June 15, July 7, 27 and 31; Auglaize River near Defiance, July 27; Maumee River near Independence Dam, July 7; Mercer—Grand Lake, July 4; Grand Reservoir, July 22; St. Mary's River, July 4 and 7; Putnam—Auglaize River east of Cloverdale, June 28; Williams—Nettle Lake and St. Joseph River, June 22. As all of these collections represent new county records they are given, with such notes and comments as seem of interest, in the list below.

One of the specimens collected by Mr. Price belongs to a species (*Somatochlora linearis* Hagen) not previously reported from Ohio. This species has a range covering the eastern half of the country; there are records for most of the states from Quebec and Maine to Georgia, and for Missouri, Illinois and Indiana. In Indiana it has been found to be rather abundant locally, mostly along woodland streams, or in neighboring open glades and roadways through the forests (Montgomery, 1934, 1941). The most recent paper on Ohio Odonata (Borror and Epstein, 1942) gives the number of species known from the state as 132, and the present addition brings this number to 133.

Records from Erie, Marion and Ottawa counties were compiled from collections made by Robert P. Mullett. The Erie County collections were made in the vicinity of Sandusky from April to July, those from Marion at Durfee's Lake, Marion, June 9, and the Whitstone River at King's Mill, July 15, and that from Ottawa on South Bass Island, August 6—all during 1942. The South Bass Island collection included specimens of *Neotetrum pulchellum*, *Pachydiplax longipennis*, *Argia apicalis*, *A. moesta*, *Enallagma carunculatum*, *E. ebrium*, *E. exsulans*, *E. hageni*, and *Ischnura verticalis*. This date, August 6, extends the known seasonal range in Ohio of *E. ebrium* and *E. hageni*, the latest previous records being July 15 and July 10, respectively. On April 30, at the Sandusky city dump, Mr. Mullett found females of *Ischnura verticalis* ovipositing and "observed one female laying eggs in a cattail stem under water for three minutes and ten seconds." *Anax junius* was taken here on the same date and later in the season 14 other species—*Gomphus spicatus*, *Perithemis tenera*, *Holotania luctuosa*, *Plathemis lydia*, *N. pulchellum*, *Sympetrum obtrusum*, *S. rubicundulum*, *P. longipennis*, *Erythemis simplicicollis*, *Tramea lacerata*, *Lestes disjunctus*, *A. apicalis*, *Enallagma anten-*

*natum* and *E. exsulans*—were taken at the same habitat and/or in an adjacent quarry.

The Portage County records were obtained from a small collection made near Garrettsville in 1936 by William Thrasher and sent in exchange for specimens of Coleoptera.

The Darke County specimens were collected along Greenville Creek, two to five miles southeast of Union City, June 26, 1942, by E. Phillips Blackburn and the author.

The Butler County records are the results of two visits to the campus of Western College at Oxford to obtain specimens of *Archilestes grandis* Rambur. A collecting party consisting of Lynn Robertson, Jr., Marshall B. McDonald and the author, made a brief stop August 24, 1939, en route home from a collecting trip to the Southeast (Montgomery, 1940), and the author, accompanied by his wife and daughter, spent a short time here October 6, 1940. The creek on the Western College campus has been described by Williamson (1930) in his account of the capture of *grandis* here, September 25 and October 11, 1927—the first record of this species northeast of Oklahoma. In 1939 we found this creek very low, only a trickle of water through the culvert in the dam below the pool and only scant cupfuls here and there among the broken pieces of limestone in the creek bed below the dam. In 1940 there was even less water and the pool above the dam was reduced in size with some mud flats exposed around its margin. No individuals of *A. grandis* were seen around or above the pool where Williamson found them comparatively abundant in 1927, but a few males—one in 1939, two in 1940—were seen and captured in the creek bed below the dam. In 1939 we found several other species of dragonflies around the pool—swarms of *Erythemis simplicicollis* and *Ischnura verticalis*, considerable numbers of *Pachydiplax longipennis* and *Enallagma civile*, and occasional individuals of *Plathemis lydia*, *Holotania luctuosa*, *Tramea lacerata* (tenerals), *Lestes rectangularis* and *Ischnura posita*. In 1940 the season was quite late at the time of our visit and dragonflies, except *Sympetrum*, were rather rare. The specimens of *Sympetrum* captured included *obtrusum*—3 ♂, *rubicundulum*—1 ♂, and *vicinum*—11 ♂, 5 ♀. The other specimens taken were *Aeshna umbrosa*—1 ♀, *Lestes congener*—5 ♂, *Enallagma civile*—1 ♂, and *Ischnura verticalis*—1 ♂, 3 ♀. The presence of *A. grandis* in the same habitat after an interval of 13 years indicates that it has established itself more or less permanently in this region.

Only a few representative and especially interesting specimens from the collections determined for Homer F. Price and Robert P. Mullett were retained for the collection of the author, the remainder were returned to the collectors. The 1939 specimens from Butler County were sent to the Museum of Zoology at the University of Michigan. All other specimens are in the collection of the author.

In the following list the species are numbered according to Borror's 1937 and 1938 lists and the records are given by counties. However, interesting observations, dates extending the known seasonal range for Ohio (these dates are starred\*), and further information on specimens of rare or unusual species are included and additional collection data are given for records of specimens not included in the collections described above.

4. *Ophiogomphus rupinsulensis* (Walsh). Ashtabula—1 ♂, Geneva, \*August 4, 1940, A. L. Burhanna.

8. *Gomphus crassus* Hagen. Defiance—Auglaize River, June 15 and \*July 7.

10. *Gomphus fraternus* (Say). Putnam.

12. *Gomphus graslinellus* Walsh. Defiance—Auglaize River, June 15, July 7; Paulding—Flatrock Creek, June 5, July 2, 14, and \*27.

25. *Dromogomphus spoliatus* (Hagen). Defiance, Paulding—Auglaize River at power dam and near Fort Brown, \*June 21 to \*July 31.

31. *Anax junius* (Drury). Mercer, Paulding. Mr. Price sent records of about 40 specimens of this species taken in Paulding County from September 5 to October 8, 1942, with a note that "several attempts were made after October 8 to take specimens, but none were seen."

34. *Epiaschna heros* (Fabricius). Paulding—1 ♀, May 6, 1942, "found nearly dead on screen on cold morning by Dorothy Wood."

36. *Aeshna constricta* Say. Paulding.

38. *Aeshna umbrosa* Walker. Portage.

42. *Cordulegaster obliquus* (Say). Portage—1 ♂, May 29, 1936.

45. *Macromia taeniolata* Rambur. Defiance—1 ♂, July 27, and 3 ♂, July 31, Auglaize River near power dam. Two of these specimens vary somewhat from the characteristics listed for this species by Williamson (1909) towards those of *wabashensis*—keel of second tibia approximately one-third of length of tibia (keel 3.5 mm., length of tibia 11 mm.), a single dorsal yellow spot on segment 8, and lateral yellow spots on frons. Also a female taken along the Auglaize River at Fort Brown, Paulding County, June 21, 1942, does not belong to this species, but as the specimen is somewhat teneral its specific position is difficult to determine. These specimens, along with a considerable number from other sources, are being held for further study as there is much need for a thorough revision of the North American species of *Macromia*.

\*133. *Somatochlora linearis* (Hagen). Paulding—1 ♂, Flatrock Creek, August 3, 1941. This is an addition to the Ohio list.

54. *Perithemis tenera* (Say). Mercer, Paulding.

64. *Holotania luctuosa* (Burmeister). Paulding, Williams.

65. *Plathemis lydia* (Drury). Defiance, Paulding, Williams.

66. *Neotetrum pulchellum* (Drury). Defiance, Williams.

68. *Eolibellula semifasciata* (Burmeister). Paulding.

70. *Sympetrum ambiguum* (Rambur). Paulding—1 ♂, along open ditch at edge of woodland, \*October 4. "Three heavy frosts before this date." *Sympetrum vicinum* and *Lestes disjunctus* were also taken on this date.

72. *Sympetrum obtrusum* (Hagen). Butler, Williams.

73. *Sympetrum rubicundulum* (Say). Defiance, Mercer, Paulding, Williams. \*May 5 to \*October 6.

76. *Sympetrum vicinum* (Hagen). Paulding.

77. *Leucorrhinia intacta* (Hagen). Marion.

78. *Pachydiplax longipennis* (Burmeister). Defiance, Marion, Mercer, Paulding.

79. *Erythemis simplicicollis* (Say). Butler, Williams.

81. *Pantala hymenaea* (Say). Paulding—1 ♀, \*September 19.

82. *Tramea carolina* (Linnaeus). Marion, Paulding. June 9, \*September 14. Mr. Price noted on September 14, that "the Trameas were rather common around the yard and orchard today. There was a stiff breeze and the Trameas hunted in the lee of the trees and rested well up on the higher branches where I could not get at them."

83. *Tramea lacerata* Hagen. Paulding.

87. *Calopteryx maculatum* (Beauvois). Darke, Paulding, Williams.

88. *Hetaerina americana* (Fabricius). Darke, Putnam.

91. *Lestes congener* Hagen. Butler.

92. *Lestes disjunctus* Selys. Defiance, Marion, Mercer, Paulding. May 12 to \*October 4.

96. *Lestes rectangularis* Say. Mercer, Paulding, Williams.

97. *Lestes dryas* Kirby. (Listed by Borror as *L. uncatus* Kirby, but Cowley, 1935, has shown that this name is a synonym.) Mercer, Paulding. \*June 5 to July 14.

98. *Lestes unguiculatus* Hagen. Paulding.

100. *Argia apicalis* (Say). Defiance, Marion, Mercer, Paulding, Putnam.

102. *Argia moesta* (Hagen). Defiance, Marion.

104. *Argia tibialis* (Rambur). Darke, Marion, Mercer, Williams.

105. *Argia violacea* (Hagen). Darke, Paulding, Williams.

106. *Amphiagrion saucium* (Burmeister). Williams.

110. *Enallagma antennatum* (Say). Paulding.

128. *Enallagma basidens* Calvert. Paulding. June 15 to August 2.  
113. *Enallagma carunculatum* Morse. Darke.  
114. *Enallagma civile* (Hagen). Defiance, Paulding.  
118. *Enallagma exsulans* (Hagen). Darke, Defiance, Marion, Paulding. \*May 14 to August 7.  
121. *Enallagma signatum* (Hagen). Darke, Paulding, Williams.  
124. *Ischnura posita* (Hagen). Marion, Paulding.  
126. *Ischnura verticalis* (Say). Defiance, Marion, Paulding.  
127. *Anomalagrion hastatum* (Say). Darke.

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